



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,009	06/09/2000	Ashok K. Shukla		3502
7590	07/26/2006		EXAMINER	
Ashok K. Shukla 10316 Kingsway Court Ellicott City, MD 21042			THERKORN, ERNEST G	
		ART UNIT	PAPER NUMBER	1723

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/591,009	SHUKLA ET AL.
	<b>Examiner</b>	<b>Art Unit</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 June 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,4,5,7-11,13 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,4,5,7-11,13 and 20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No support can be found "said chromatographic particles are larger in size than the said perforations." As such, the claims are considered to be drawn to new matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 102(E) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Valaskovic (U.S. Patent No. 6,190,559). The claims are considered to read on Valaskovic (U.S. Patent No. 6,190,559). However, if a difference exists between the claims and Valaskovic (U.S. Patent No. 6,190,559), it would reside in optimizing the elements of Valaskovic (U.S. Patent No. 6,190,559). It would have been obvious to optimize the elements of Valaskovic (U.S. Patent No. 6,190,559) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Valaskovic (U.S. Patent No. 6,190,559) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use a plunger in Valaskovic (U.S. Patent No. 6,190,559) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270). At best, the claims differ from Valaskovic (U.S. Patent No. 6,190,559) in the clarity of reciting the chromatography particles are larger in size than the perforations. Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses

the pores are roughly one-third of the particle diameter. It would have obvious that Valaskovic (U.S. Patent No. 6,190,559)'s chromatography particles are larger in size than the perforations because Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses the pores are roughly one-third of the particle diameter.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use

a plunger in Valaskovic (U.S. Patent No. 6,190,559) in view of Afeyan (U.S. Patent No. 5,019,270) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836). At best, the claims differ from Valaskovic (U.S. Patent No. 6,190,559) in the clarity of reciting the chromatography particles are larger in size than the perforations. Korn (U.S. Patent No. 975,874) (page 1, lines 53-57 and 67-70) discloses that slits permit the easy escape of liquor while retaining solids. Hugentobler (U.S. Patent No. 3,398,836) (column 1, lines 24-40 and 62-63) discloses that a wide faced support with perforations allows substantially balanced flow resistance in the vertical direction distributed over the entire bottom area. It would have obvious either to use a slit in Valaskovic (U.S. Patent No. 6,190,559) because Korn (U.S. Patent No. 975,874) (page 1, lines 53-57 and 67-70) discloses that slits permit the easy escape of liquor while retaining solids or to use a wide faced bottom with perforations because Hugentobler (U.S. Patent No. 3,398,836) (column 1, lines 24-40 and 62-63) discloses that a wide faced support with perforations allows substantially balanced flow resistance in the vertical direction distributed over the entire bottom area.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) as applied to claims 1, 2, 4, 5, 7-11, 13-16,

Art Unit: 1723

and 20 above, and further in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use a plunger in Valaskovic (U.S. Patent No. 6,190,559) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 102(E) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kopaciewicz (U.S. Patent No. 6,048,457). The claims are considered to read on Kopaciewicz (U.S. Patent No. 6,048,457). However, if a difference exists between the claims and Kopaciewicz (U.S. Patent No. 6,048,457), it would reside in optimizing the elements of Kopaciewicz (U.S. Patent No. 6,048,457). It would have been obvious to optimize the elements of Kopaciewicz (U.S. Patent No. 6,048,457) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Kopaciewicz (U.S. Patent No. 6,048,457) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to

Art Unit: 1723

use a plunger in Kopaciewicz (U.S. Patent No. 6,048,457) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270). At best, the claims differ from Kopaciewicz (U.S. Patent No. 6,048,457) in the clarity of reciting the chromatography particles are larger in size than the perforations. Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses the pores are roughly one-third of the particle diameter. It would have obvious that Kopaciewicz (U.S. Patent No. 6,048,457)'s chromatography particles are larger in size than the perforations because Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses the pores are roughly one-third of the particle diameter.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) because Sanford (U.S. Patent

Art Unit: 1723

No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use a plunger in Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559). At best, the claims differ from Kopaciewicz (U.S. Patent No. 6,048,457) in the clarity of reciting the chromatography particles are larger in size than the perforations. Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses the pores are roughly one-third of the particle diameter. Valaskovic (U.S. Patent No. 6,190,559) (column 4, lines 19-25 and column 5, lines 5 and 6) discloses that additional packing material may be added to the column to accommodate different applications. It would have been obvious that Kopaciewicz (U.S. Patent No. 6,048,457)'s chromatography particles are larger in size than the

Art Unit: 1723

perforations because Afeyan (U.S. Patent No. 5,019,270) (column 7, lines 28-32) discloses the pores are roughly one-third of the particle diameter. It would have been obvious to add additional packing in Kopaciewicz (U.S. Patent No. 6,048,457) because Valaskovic (U.S. Patent No. 6,190,559) (column 4, lines 19-25 and column 5, lines 5 and 6) discloses that additional packing material may be added to the column to accommodate different applications.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) as applied to claims 1, 2, 4, 5, 7-11, 13-16,

and 20 above, and further in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) in reciting use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use a plunger in Kopaciewicz (U.S. Patent No. 6,048,457) in view of Afeyan (U.S. Patent No. 5,019,270) and Valaskovic (U.S. Patent No. 6,190,559) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Claims 1, 2, 4, 5, 7-11, 13-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836). At best, the claims differ from Kopaciewicz (U.S. Patent No. 6,048,457) in the clarity of reciting the chromatography particles are larger in size than the perforations. Korn (U.S. Patent No. 975,874) (page 1, lines 53-57 and 67-70) discloses that slits permit the easy escape of liquor while retaining solids. Hugentobler (U.S. Patent No. 3,398,836) (column 1, lines 24-40 and 62-63) discloses that a wide faced support with perforations allows substantially balanced flow resistance in the vertical direction distributed over the entire bottom area. It would have been obvious either to use a slit in Kopaciewicz (U.S. Patent No. 6,048,457) because Korn (U.S. Patent No. 975,874) (page 1, lines 53-57 and 67-70) discloses that slits permit the easy escape of liquor while retaining solids or to use a wide faced bottom with perforations because Hugentobler (U.S. Patent No. 3,398,836)

Art Unit: 1723

(column 1, lines 24-40 and 62-63) discloses that a wide faced support with perforations allows substantially balanced flow resistance in the vertical direction distributed over the entire bottom area.

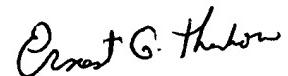
Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Sanford (U.S. Patent No. 5,589,063). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) in reciting use of multiple units. Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention. It would have been obvious to use an array of columns in Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) because Sanford (U.S. Patent No. 5,589,063) (column 2, lines 11-18) discloses that use of an array of columns allows automated processing without technician intervention.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) as applied to claims 1, 2, 4, 5, 7-11, 13-16, and 20 above, and further in view of Golias (U.S. Patent No. 4,341,635). At best, the claim differs from Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) in reciting

use of a piston. Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles. It would have been obvious to use a plunger in Kopaciewicz (U.S. Patent No. 6,048,457) in view of either Korn (U.S. Patent No. 975,874) or Hugentobler (U.S. Patent No. 3,398,836) because Golias (U.S. Patent No. 4,341,635) (column 3, lines 20-26) discloses that use of a plunger forms a pressure drop across the particles.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
July 20, 2006